

# Notice of Allowability

Application No.

10/689,431

Examiner

Minh N. Tang

Applicant(s)

SU ET AL.

Art Unit

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/20/2003.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☒ The drawings filed on 20 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 01/29/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on January 29, 2004 is considered by the examiner.

### **Examiner's Amendment**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. McClure on January 07, 2005.

The Examiner called Mr. McClure because of the informality of claim 12, the improper dependency of claims 11 and 13-17:

The application has been amended as follows:

a/ in claim 11, line 1, "1" has been changed to -- 7 --.

b/ in claim 12, line 27, " ,," should be -- , --.

c/ in claims 13-17, all in line 1, "claim 13" has been changed to -- claim 12 --.

### ***Reasons For Allowance***

3. The following is an examiner's statement of reasons for allowance:

Claims 1-11 recite, inter alia, a capacitance-voltage measuring device having a sense probe in contact the conductive gate of each test structure, a stimulus probe in contact with the source and drain region of each test structure to measure a

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capacitance value of said test structure, and a bulk biasing probe to force said bulk region between said source and drain region to a second voltage level, whereby said second voltage level forces said bulk region to an inversion, said capacitance-voltage measuring device varying a first voltage at said source and drain region to force said test structure into the inversion state and measuring a first capacitance of said test structure.

Claims 12-22 recite, inter alia, performing a capacitance-voltage measurement by the steps of: connecting the source region with the drain region of each test structure, placing a sense probe in contact the conductive gate of each test structure, placing a stimulus probe in contact with the source and drain region of each test structure to measure a capacitance value of said test structure, varying a first voltage between said stimulus probe and said sense probe to force said test structure into an inversion state, placing a bulk biasing probe in contact with said bulk region to force said bulk region between said source and drain region to a second voltage to insure said inversion state, and measuring a first capacitance of said test structure.

Claims 23-32 recite, inter alia, measuring a first capacitance-voltage curve of the transistor under inversion and accumulation conditions by the step of: applying a direct current signal and an alternating current signal between the gate and a common connection of the source/drain regions and the well pick-up contact; and measuring a second capacitance-voltage curve of the transistor under inversion conditions by the steps of: applying the direct current signal and the alternating current signal between the gate and the source/drain regions, and floating the well pick-up contact.

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The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include the above limitations.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh N. Tang whose telephone number is (571) 272-1971. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (571) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MINH NHUT TANG  
PRIMARY EXAMINER

01/10/05